CLAIMS

What is claimed is:

1. A method comprising:

decoding a first slice of a first frame of a video; and

decoding a second slice of a second frame of the video in parallel with said decoding of the first slice of the first frame of the video, at least in part.

2. The method of claim 1, wherein said decoding of the first slice comprises determining whether the first slice has any decoding dependency on having one or more other slices decoded first.

3. The method of claim 2, wherein said decoding of the first slice further comprises determining whether the one or more other slices on which decoding of the first slice depends have been decoded, if the first slice is determined to be dependent on having one or more other slices decoded first.

4. The method of claim 3, wherein said decoding of the first slice further comprises temporarily suspending decoding the first slice if the first slice is determined to be dependent on having one or more other slices decoded first, and at least one of the one or more other slices has not been decoded.

5. The method of claim 3, wherein said decoding of the first slice further comprises decoding the first slice when all of said one or more other slices on which decoding of the first slice depends have been decoded.

6. The method of claim 2, wherein said decoding of the first slice further comprises decoding the first slice on determining that the first slice has no decoding dependency.

7. The method of claim 1, wherein the first and the second frame are one of the same frame.

8. A method comprising:

retrieving a slice of a frame of a video;

determining whether the slice has any decoding dependency on having one or more other slices decoded first;

further determining whether the one or more other slices on which decoding of the slice depends have been decoded, if the slice is determined to be dependent on having one or more other slices decoded first; and

temporarily suspending decoding the slice if the slice is determined to be dependent on having one or more other slices decoded first, and at least one of the one or more other slices has not been decoded.

9. The method of claim 8, wherein the method further comprises decoding the slice when all of said one or more other slices on which decoding of the slice depends, have been decoded.

10. The method of claim 8, wherein the method further comprises decoding the slice on determining that the slice has no decoding dependency.

11. An article of manufacture comprising:

storage medium; and

a plurality of programming instructions stored on said storage medium, the programming instructions designed to enable an apparatus to

decode a first slice of a first frame of a video, and

decode a second slice of a second frame of the video in parallel with said decoding of the first slice of the first frame of the video, at least in part.

12. The article of claim 11, wherein said decoding of the first slice comprises:

determining whether the first slice has any decoding dependency on having one or more other slices decoded first;

further determining whether the one or more other slices on which decoding of the first slice depends have been decoded, if the first slice is determined to be dependent on having one or more other slices decoded first; and

temporarily suspending decoding the first slice if the first slice is determined to be dependent on having one or more other slices decoded first, and at least one of the one or more other slices has not been decoded.

13. The article of claim 12, wherein the programming instructions are further designed to enable the apparatus to decode the first slice when all of said one or more other slices on which decoding of the first slice depends, have been decoded.

14. The article of claim 12, wherein the programming instructions are further designed to enable the apparatus to decode the first slice on determining that the first slice has no decoding dependency.

15. An apparatus comprising:

a buffer to store frames of a video;

a first decoding unit coupled to the buffer to decode a first slice of a first frame of the video; and

a second decoding unit to decode a second slice of a second frame of the video in parallel with said first decoding unit decoding the first slice of the first frame of the video, at least in part.

16. The apparatus of claim 15, wherein said first decoding unit comprises logic to determine whether the first slice has any decoding dependency on having one or more other slices decoded first.

17. The apparatus of claim 16, wherein said first decoding unit further comprises logic to determine whether the one or more other slices on which decoding of the first slice depends have been decoded, if the first slice is determined to be dependent on having one or more other slices decoded first.

18. The apparatus of claim 17, wherein said first decoding unit further comprises logic to temporarily suspend decoding the first slice if the first slice is determined to be dependent on having one or more other slices decoded first, and at least one of the one or more other slices has not been decoded.

19. The apparatus of claim 18, wherein said first decoding further comprises logic to decode the first slice when all of said one or more other slices on which decoding of the first slice depends have been decoded.

20. The apparatus of claim 16, wherein said first decoding further comprises logic to decode the first slice on determining that the first slice has no decoding dependency.

21. The apparatus of claim 15, wherein the apparatus is an ASIC comprising said first and second decoding units.

22. The apparatus of claim 15, wherein the apparatus is a circuit board comprising an ASIC having at least one of said first and second decoding units.

23. The apparatus of claim 22, wherein the apparatus is a selected one of a palm sized computing device, a wireless mobile phone, a digital personal assistant, a set-top box, a digital versatile disk player, a television, and a display monitor.

24. The apparatus of claim 15, wherein

the first and second decoding units comprise first and second threads of programming instructions designed to perform said first and second decoding respectively; and

the apparatus further comprises one or more memory units to store the programming instructions, and at least one processor coupled to the one or more memory units to execute the first and second threads of programming instructions.

25. The apparatus of claim 24, wherein the apparatus is a selected one of a palm sized computing device, a wireless mobile phone, a digital personal assistant, a laptop computing device, a desktop computing device, a set-top box, a server, a digital versatile disk player, a television, and a display monitor.

26. A system comprising:

a video provider to provide an encoded video; and

a video renderer coupled to the video provider to receive the encoded video, decode the received video, and render the decoded video, including

a first decoding unit to decode a first slice of a first frame of the video, and

a second decoding to decode a second slice of a second frame of the video in parallel with said first decoding unit decoding the first slice of the first frame of the video, at least in part.

27. The system of claim 26 wherein said first decoding unit of the video renderer is equipped to

determine whether the first slice has any decoding dependency on having one or more other slices decoded first,

further determine whether the one or more other slices on which decoding of the first slice depends have been decoded, if the first slice is determined to be dependent on having one or more other slices decoded first; and

temporarily suspend decoding the first slice if the first slice is determined to be dependent on having one or more other slices decoded first, and at least one of the one or more other slices has not been decoded.

28. The system of claim 27, wherein said first decoding unit of the video renderer is further equipped to decode the first slice when all of said one or more other slices on which decoding of the first slice depends, have been decoded.

29. The system of claim 27, wherein said first decoding unit of the video renderer is further equipped to decode the first slice on determining that the first slice has no decoding dependency.